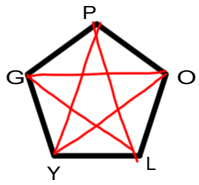
6-1 Polygons

polygon--plane figure, formed by 3 or more segments that intersect at their endpoints

Sides--segments GP OL

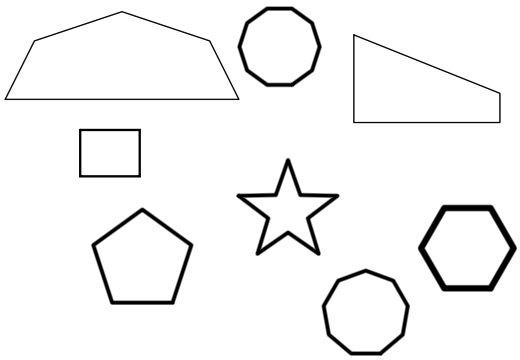
Vertex--endpoints Y, L



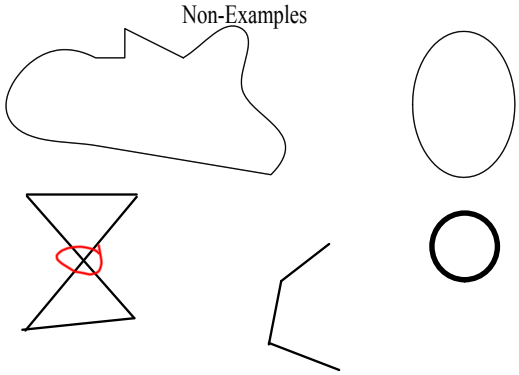
Diagonal--Segment that joins 2 nonconsecutive vertices PY GL

Name the polygon POLYG LYGPO

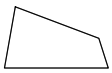
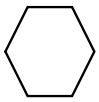
Examples of Polygons

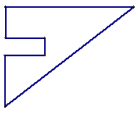


Non-Examples



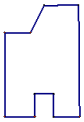
Types of Polygons

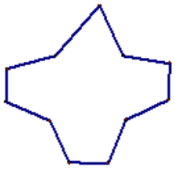
Shape	# of sides	Name
	3	Triangle
	4	Quadrilateral
	5	Pentagon
	6	Hexagon

 7 Heptagon

 8 Octagon

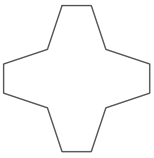
 9 Nonagon

  10 Decagon

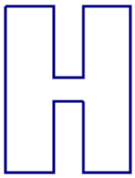


11-gon

12-gon

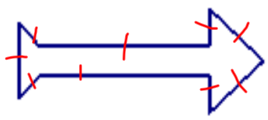


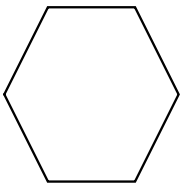
Dodecagon



Is the figure a polygon?
If so, what type?

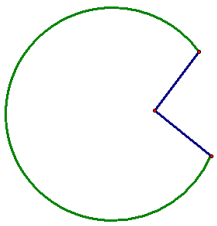
yes
nonagon



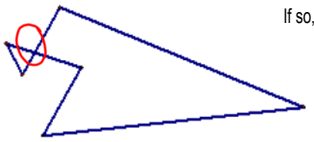


Is the figure a polygon?
If so, what type?

yes
hexagon

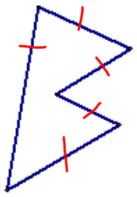


no

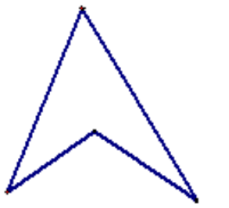


Is the figure a polygon?
If so, what type?

no

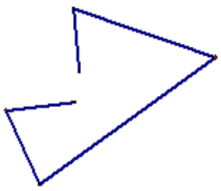


yes
pentagon

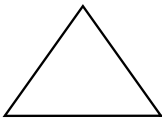


Is the figure a polygon?
If so, what type?

yes
quadrilateral

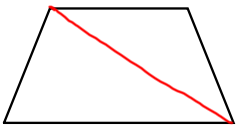


no



How many degrees are there in a triangle?

180

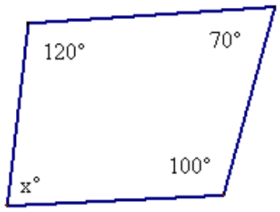


How many triangles? 2

So, how many degrees?

2(180) = 360

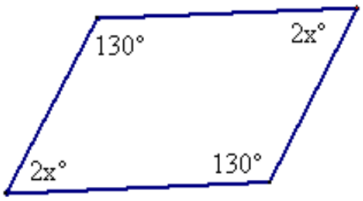
Theorem 6.1-- Quadrilateral Interior angles Theorem --The sum of the measures of the interior angles of a quadrilateral is 360.



$120 + 70 + 100 + x = 360$

$x + 290 = 360$

$x = 70$



$130 + 2x + 130 + 2x = 360$

$260 + 4x = 360$

$4x = 100$

$x = 25$

HW
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